Remarks/Arguments

Claims 1-3, 5, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson (U.S. 4,523,230) in view of Jang (U.S. 5,361,094), and further in view of Klink (US 2002/0067337 Al). Applicant's claim 1 recites, "a method for reducing sparkle artifacts in a liquid crystal imager, comprising the steps of gamma correcting a video drive signal; and slew rate limiting at least a portion of said gamma corrected video drive signal." Applicant's claim 6 recites, "An apparatus for reducing sparkle artifacts in a liquid crystal imager, comprising a device for gamma correcting a video drive signal for providing a gamma corrected video drive signal, and a slew rate limiter coupled to said device for gamma correcting so as to receive said gamma corrected drive signal, for slew rate limiting said gamma corrected video drive signal."

Regarding independent claims 1 and 6, the office action acknowledges neither Carlson nor Jang teach slew rate limiting. The office action states Klink teaches an LCOS imager that slew rate limits portion of post gamma correction video. The office action states the motivation for combining these inventions would have been to provide an excellent waveform device display capable of efficiently displaying large quantity of data. Applicant respectfully disagrees. Klink lacks any teaching or suggestion to provide a slew rate limiter that slew rate limits a gamma corrected drive signal. The cited portions of Klink are reproduced below for ease of reference.

> **[0021]** Referring to **FIG. 1**, a block diagram of exemplary circuitry **10** for driving an imager **18** of a matrix display such as a liquid crystal on silicon (LCOS) display is shown. The circuitry **10** includes a digital IC **12** and an analog signal IC **16**. The digital IC **12** preferably converts an incoming 60 Hz frame rate to 120 Hz via a ping-pong memory architecture **14** and also performs gamma table operation through programmable look-up tables. Gamma correction is applied on the 8-bit RGB inputs to form 10-bit RGB output words. The digital IC **12** utilizes a four phase 10-bit D/A scheme per color in order to minimize the system bandwidth. In the present state of the art, four phases are needed because one phase would require too high an analog sample rate and thus, too high a slew rate. Each phase carries every fourth pixel, so the digital IC **12** preferably generates the four phases. In one embodiment, the digital IC **12** can comprise a digital-to-analog converter coupled to an analog demultiplexer. In

A statement that a one phase D/A scheme, if employed, would require high analog sample rates, and thus [*the D/A device*] would require high slew rates [*as a device characteristic*] is not a teaching to slew rate limit any signal, nor is it a teaching to slew rate limit a particular signal, nor is it a teaching to slew rate limit a gamma corrected video drive signal by providing the gamma corrected signal to a slew rate limiter.

The term "slew rate" in the context of the cited reference and D/A conversion devices would be understood by those of ordinary skill in the art as comparing the switching characteristics of one D/A converter type to the switching characteristics of another type of D/A converter. This does not amount to a suggestion to provide a particular signal to a slew rate limiter so that the signal can be slew rate limited.

Further, the cited reference states:

> **[0024]** This constraint of F_{clk} pushes the envelope of state of the art electronics due to the high slew rates required by the opamps and drive electronics in the imager. For example, in a 1280×1024×60 Hz system, the system clock frequency is F_{clk}=39.32 Mhz.

A statement that high slew rates are required by op-amps and drive electronics is not a teaching to slew rate limit a signal. A statement that high slew rates are **required** by op-amps and drive electronics is a teaching against slew rate limiting.

A statement that high slew rates are required by op-amps and drive electronics is not a teaching to slew rate limit a particular signal, nor is it a teaching to provide a gamma corrected drive signal to a slew rate limiter and to slew rate limit the gamma corrected drive signal.

Therefore, applicant respectfully submits none of the cited references, taken alone or in combination teaches or suggests the invention defined by applicant's

independent claims 1 and 6. Since the remaining claims in the case depend from either claim 1 or claim 6, all claims in the case are believed allowable without further amendment. Applicant requests allowance of the claims at an early date.

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